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ABSTRACT

This competency-based preservice home economics teacher education module on operations and activities of a food service operation is the second in a set of three modules on occupational education relating to foods and nutrition. (This set is part of a larger series of sixty-seven modules on the Management Approach to Teaching Consumer and Homemaking Education [MATCHE]--see CE 019 901-967.) Following the module objectives and overview, seven units of instruction are presented: (1) major work centers (includes three lessons on operation and activities within major work centers, space and equipment required for work centers, and adapting a high school foods laboratory to an occupational food service program); (2) preparation area; (3) salad area; (4) bakery and dessert area; (5) dishwashing areas; (6) serving area; and (7) receiving and storage area. Each unit generally includes the following elements: objective, overview, narrative summary, suggested activities, and suggested resources. A list of suggested module resources (books, periodicals, audiovisuals, equipment catalogs) and a module pre/posttest (with answer key) concludes the document. (Workshop proceedings relating to the development of these modules are available in the ERIC system as CE 019 896-899; also available is a module on utilizing FHA-HERO as an instructional strategy to expand and strengthen the home economics instructional programs [CE 019 900].) (JH)

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OCCUPATIONAL STRAND:

FOODS AND NUTRITION

MODULE II-C-2 OPERATIONS AND ACTIVITIES OF A FOOD SERVICE OPERATION

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1978

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Sacramento

CE 019 939

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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MATCHE

Management Approach to Teaching Consumer and Homemaking Education

MATCHE is an individualized, competency-based preservice curriculum designed for home economics education students at the preprofessional, upper division level. MATCHE is a comprehensive curriculum based on selected objectives which give emphases in three areas: 1) consumer approach to homemaking education, 2) teaching home economics in economically depressed areas, and 3) establishing occupational programs related to home economics. The material for each subject matter area of home economics has been organized into these three strands, and includes an FHA-HERO emphasis. These subject matter areas are home economics education core, housing, foods and nutrition, textiles and clothing, human development, and management.

The MATCHE modules were written by subject matter specialists from various colleges and universities offering home economics and therefore each is unique in the approach used for the development of the objectives. The modules allow for differences in level of achievement, rate of learning, and learning goals. They may be used independently, combined into a sequential series, or as a random set of conceptual units. Any instructor using the material can easily adapt the material to a specific group of students, the locale, method of instruction, and available facilities. Learning may be facilitated by offering one module in conjunction with others.

As MATCHE is continuously up-dated by those using the curriculum, some concepts and objectives may be added and others deleted. The purpose is to continually strengthen the program for pre and inservice home economics teachers.

Guidelines for Use and Continuous Development of MATCHE are on file with Home Economics units in each of the fifty state departments of education plus all of the Home Economics Departments in California institutions offering home economics education. This booklet and proceedings from the four MATCHE workshops give background information concerning the purpose and development of the MATCHE project.

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MATCHE PROJECT

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OPERATIONS AND ACTIVITIES OF A FOOD SERVICE OPERATION

Module Objectives

The MATCHE student will be able to draw an illustration which shows the appropriate space and equipment required for any of the work centers or areas of a food service operation, including: 1) preparation area, 2) major work centers, 3) salad area, 4) bakery and dessert area, 5) dishwashing area, 6) serving area, and 7) receiving and storage area.

The MATCHE student will be able to correctly identify the operations and activities which occur within any of the work centers or areas of a food service operation, including: 1) preparation area, 2) major work centers, 3) salad area, 4) bakery and dessert area, 5) dishwashing area, 6) serving area, and 7) receiving and storage area.

Module Overview

A food service operation is made up of several components, each with its own purpose and function. The efficiency with which each component works affects the entire operation. Adequate space and equipment must be provided for preparing and serving food, and each major work center must be able to fulfill its function with speed and efficiency. In planning a food service operation, you must know the operations and activities of each area and work center in order to provide appropriate space and equipment.

To adequately prepare you to plan a food service operation, this module has been divided into the following units:

Unit 1: Major Work Centers

Unit 2: Preparation Area

Unit 3: Salad Area

Unit 4: Bakery and Dessert Area

Unit 5: Dishwashing Area

Unit 6: Serving Area

Unit 7: Receiving and Storage Area

UNIT 1

MAJOR WORK CENTERS

Objectives

The MATCHE student will be able to identify the operations and activities which occur within the major work centers of a food service operation.

The MATCHE student will be able to identify the space and equipment which are required for the major work centers of a food service operation.

The MATCHE student will demonstrate how a high school foods laboratory can be adapted to an occupational food service program.

Overview

Basic units of a layout which generally represent the work area for a single person are called work centers. The volume of material handled and the number of functions performed determine the number of centers required in each section and their desirable location. The sizes and space requirements are a function of the equipment within the center as well as the limitations of the human body. Whenever possible, each work center should be completely self sufficient for the work to be done in it.

The purpose of this unit is to help to clarify the major work centers of a food service operation and the space and equipment requirements they demand.

Lesson 1: Operation and Activities Within Major Work Centers

Narrative Summary

Experience has shown that the most well designed kitchens will not prove successful unless those working within them are fully cognizant of the make-up of the various work centers. In the case of the supervisor, there must be further in-depth knowledge of the relationships which exist within and between the various centers so that she or he may ably direct the work of others.

All activities should be submitted to and discussed with your instructor.

Suggested Activities

1. Read Kotschevar and Terrell, pp. 28-30, 33, 39 (Fig. 2.3), 52-59, for an overview of how work centers fit into work sections and which in turn, when fitted properly together, become functional layout plans.

2. Read Kotschevar and Terrell, pp. 30-49, for an overview of the similarities and differences within and between the various types of food service establishments.

3. Kotschevar and Terrell have identified six component work units in a full-production kitchen as:

   - ordering, receiving, and storage
   - preprocessing of raw materials such as meats, vegetables, and fruits
   - cooking--soups, vegetables, meats, sauces, and bakery goods
   - pantry or set-up section--salads, sandwiches, beverages, desserts
   - service areas
   - housekeeping or clean-up departments--pot washing, dishwashing, janitor services

   List which of these components would probably be found in the following food service establishments:

   a. College or University

      (1) cafeteria
      (2) coffee shop/snack bar
      (3) special catering
      (4) union building
      (5) faculty club
      (6) residence hall

   b. Commercial Organizations

      (1) airlines
      (2) cafeterias
      (3) coffee shops
      (4) delivered foods
      (5) drive-ins
      (6) service restaurants
      (7) take out foods

c. Hospital Foods

d. Nursing and Retirement Homes

e. Industrial Food Service

(1) executive dining room
(2) seated service
(3) cafeteria
(4) mobile and vending service

f. School Food Service

g. Miscellaneous

(1) camps
(2) self-contained resorts
(3) Greek letter societies
(4) churches
(5) clubs

4. Suggested additional assignments: read Kotschevar and Terrell, pp. 49-50.

a. Identify six plans of operation used in six different local institutions.

b. List foods and services that each of the organizations provides and the prices charged.

c. Evaluate the overall effectiveness of the operations in terms of acceptability, speed and efficiency of operation, attractiveness, outstanding characteristics.

d. Evaluate the factors in (c) in terms of the correctness of the layout and equipment planning which was done for the facility.

Lesson 2: Space and Equipment Required for Major Work Centers

Narrative Summary

The amount of space allocated to a work area and the arrangement of equipment within that space will affect the efficiency of the worker.

Suggested Activities

1. Read Kotschevar and Terrell, pp. 59-158. Choose a full-service facility production kitchen in your neighborhood and:

   a. (1) list all of the work sections in it;
      (2) identify all the work centers in each of the sections;
      (3) evaluate the work center arrangements as to the adequacy of the relationships between them;
      (4) prepare a diagram of the flow of work, using squares to represent sections and arrows to indicate direction of flow;
      (5) evaluate these flow patterns by the eight basic rules of work flow (p. 60) and state the type of flow represented in each case;
      (6) redesign the work flow for better utilization of the eight rules (what type of flow is now represented in the design?);
      (7) indicate by a colored line on the section plan the route taken by food materials used; show point of origin, route followed in processing, and destination.

   b. (1) Draw a man-machine chart in which a piece of power equipment is used to facilitate the work in some kitchen (may be the one in (1a) above).
      (2) Draw one work section to scale; prepare a distance chart for a typical operation.

   c. Make a cross chart of the section redesigned in a.(6); compare with work flow before redesigning.

   d. Observe a task being performed in the kitchen. Note the materials, motions, and equipment used, the sequence of work, and the character of the finished products. Recommend changes which might be made in lieu of the five classes of change.

   Note: Be sure that you have the permission of the manager or supervisor in all kitchens in which you observe and make sure that all workers know why you are there.

2. Write out an explanation of the following terms:

   Straight-line flow
   Functional flow
   Interaction totals
   Therblig
   Simo chart
   Micromotion
   Process chart
   Five symbols for motion established by the ACME
   Man and Machine chart

Sequence chart
Master process chart
Cross charting
Stroboscopic pictures
Cyclegraph
Snapback method
Methods time measurement
Work sampling

3. a. Select three food facilities of different types (school, industrial, commercial, hospital, other) and find out for each:

   (1) the number served (including personnel)
   (2) serving hours or schedule
   (3) total seating capacities; total persons served at peak periods

   b. Find out for each of the facilities the number of square feet or meters in:

   (1) dining area
   (2) kitchen areas
   (3) storage, both common and refrigerated
   (4) employee areas
   (5) guest areas
   (6) office

   c. Evaluate adequacy of each (a) in conference with the manager and (b) from personal observation, using Kotschevar and Terrell rules of thumb.

   d. Make recommendations of possible means for better use of present space allocations.

4. Prepare an analysis of equipment needs based on a given system of operation, a timetable for equipment use, and a summary with equipment dimensions for floor plans.

Lesson 3: Adapting High School Foods Laboratory to an Occupational Food Service Program

Narrative Summary

The task in this lesson is to demonstrate how a high school foods lab can be used for an occupational program.

Suggested Activity

Select a high school food lab floor plan. Using equipment catalogs, identify "transitional size" equipment which could be used in your plan, either by replacing or in addition to the equipment in the room. (By transitional is meant 15 pound capacity deep fat fryers, small commercial sized grills and the like--equipment which can be used in "quantity" food preparation but is still small enough to fit into a homemaking suite or lab--and work on available utility lines in the kitchen.)

If possible, check this plan with the instructor of the high school food service. Draw up your plans in ¼"=1' scale; price the entire project; check with your instructor.

Suggested Resources

Books

Axler, Bruce H. Management of Hospitality Operations. Indianapolis: Bobbs-Merrill, 1976, pp. 108-45.

Eshbach, Charles E. Food Service Management. Boston: Cahners Books. No date, pp. 111-24.

_____. Food Service Trends. Boston: Cahners Books. 1974, pp. 3-8, 12-25.

Fearn, David A. Food and Beverage Management. London: Butterworths, 1973, pp. 144-50.

Haines, Robert G. Food Preparation for Hotels, Restaurants, and Cafeterias. Chicago: American Technical Society, 1968, pp. 14-31.

Kahrl, William L. Food Service Productivity and Profit Ideabook. Boston: Cahners Books, 1975, pp. 79-116.

Keiser, James, and Elmer Kallio. Controlling and Analyzing Costs in Food Service Operations. New York: John Wiley and Sons, 1974, pp. 3, 4; 15-22; 93-102; 148-54.

Keister, Douglas C., and Ralph D. Wilson. Hotel and Restaurant Management. Berkeley: McCutchan Publishing, 1971, pp. 136-45.

Kotschevar, Lendal H., and Margaret E. Terrell. Food Service Planning: Layout and Equipment. New York: John Wiley and Sons, 1977, pp. 28-30; 31-49; 50-59; 60-158.

Villella, Joseph A. The Hospitality Industry: The World of Food Service. New York: McGraw-Hill, 1975, pp. 82-136.

West, Bessie Brooks, Levelle Wood, Virginia Harger, and Grace Shugart. Food Service in Institutions. New York: John Wiley and Sons, 1977.

Periodicals, Bulletins and Pamphlets

Almarode, Richard L. "Developing a Hospitality Program in High Schools," Council of Hotel, Restaurant and Institutional Education, Pennsylvania State University, 1970, pp. 29, 30, 35-46.

_____. "Guidelines for Hospitality Education in Junior Colleges". Council of Hotel, Restaurant and Institutional Education, Pennsylvania State University, 1967, pp. 35-37.

Batmale, Louis F., and George G. Mullany, eds. "Career Training in Hotel and Restaurant operation ... at City College of San Francisco". San Francisco: City College of San Francisco, Ocean and Phelan Avenues. (Suggest you contact the Statler Library at CCSF) pp. 40-42; 71-73; 92-95.

Equipment Catalogs

Anets-Anetsberger Bros., Inc., Northbrook, Illinois 60062

Bally-Bally Base and Cooler, Inc., Bally, Pennsylvania 19503

Carter-Hoffman-Carter Hoffman Corporation, 1551 McCormick Avenue, Mundelein, Illinois 60060

Cres-Cor:Crescent Metal Products, Inc., 12711 Taft Avenue, Cleveland, Ohio 44100

Thermaduke-Duke Manufacturing Company, St. Louis, Missouri 63247

GE-General Electric Commercial Equipment Department, 14th and Arnold Streets, Chicago, Illinois 60600

Groen-Groen Division Dover Corporation, 1900 Pratt Blvd., Elk Grove Village, Illinois 60007

Henny Penny-Henny Penny Corporation, Eaton, Ohio 45320

Hobart-Hobart Food Equipment Company, Troy, Ohio 45374

Seco-Seco Food Preparation and Service Equipment, P.O. Box 7116, St. Louis, Missouri 63177

Shellymatic-Shelly Manufacturing Company, P.O. Box 308, Tamiami Station, Miami, Florida 33144

South Bend-South Bend Range Company, South Bend, Indiana 46621

Vulcan-Hart:Vulcan-Hart Corporation, 3600 North Point Blvd., Baltimore, Maryland 21222

Note: Call your local restaurant association and ask for the names of equipment dealers in your vicinity. It can lend or give you a greater variety of catalogs than those listed above. Be sure to get up-to-date price lists for comparison purposes.

There is no Progress Test. Check with your instructor, if no further assignments, proceed to Unit 2.

UNIT 2

PREPARATION AREA

Objective

The MATCHE student will be able to identify and describe the operations and activities which occur within the preparation area of a food service operation.

Overview

The focal point of the food center is the area in which food is prepared. Unless the preparation area has been properly planned and equipped, the food service operation cannot operate effectively and efficiently.

The space required for food preparation includes all areas in which food is prepared from its reception to the serving counter. The space may be divided into any number of areas, such as the pre-preparation, main cooking units, dessert, and salad and/or sandwich preparation areas. The equipment which will be used in these areas ranges from sinks, tables, and cutting boards, to steam cookers, kettles, and ranges.

The purpose of this unit is to help you identify the operations, activities, equipment, and space requirements of the preparation area.

Narrative Summary

There are many variations in the amounts and types of food preparation in food service facilities today. Complete processing from raw materials may be done, or food may be purchased ready for immediate consumption by the patrons of the establishment. Currently one will find public food facilities for:

1. Complete production of food for any number of different menus.
2. "Fast foods: operations which specialize in a few items, usually fried or broiled.
3. Frozen food used for the entire meal.
4. Prepared food used for part of the meal, such as the entree only.
5. A "satellite" or contralized service of fully prepared food which is then sent to various locations.

One common theme will pervade all these operations, however, the basic food preparation (or assembly) section is considered the heart of the operation. This lesson is designed to acquaint you with this important aspect of food preparation and service. The work covered in this unit is a logical step to the other areas in food preparation.

> All assignments should be checked with the instructor before you proceed.

Suggested Activities

1. Review the resources listed for this module.

2. Scan pp. 191-229 in Kotschevar and Terrell's Food Service Planning: Layout and Equipment, to get the overall "feel" of the production section. Study pp. 445-486 in Kotschevar and Terrell's Food Service Planning: Layout and Equipment, for concepts dealing with the physics of energy, lighting, water, steam, plumbing, environmental planning, sound control; factors involved in the selection and use of walls and floors; general principles of equipment selection.

3. List seven common functions in cooking (food preparation).

4. Draw, in rough scale, a main range unit comprised of the following pieces of equipment: steam jacketed kettle (60 gallon), 40 pound capacity deep fat fryer, 2-compartment sink, 4 burner grill, 2-deck convection oven for following arrangements: back-to-back parallel, face-to-face parallel, "U" shaped, "L" shaped. Give advantages and disadvantages of all arrangements, considering ease in supervision, cost, venting, and space.

5. Working in groups of four, obtain permission to spend an afternoon and early evening in a full-service kitchen and fast food operation:

   a. Observe procedures, equipment, and labor required in each facility.
   b. Contrast the items in "a." above with those in a fast food operation which uses at least 25 percent of convenience items.
   c. Compare the (1) procedures used; (2) equipment required; (3) labor required; (4) per portion costs based on purchase prices and recipe costs; (5) per portion labor costs for processing or conditioning food for service; and (6) storage requirements of the two establishments.

6. Calculate the margin of difference, per portion, when served between "scratch" food and "ready" food.

7. Evaluate the cooking section in the full-service restaurant in terms of supervision, interrelationships with other sections, freedom from interruption by outsiders, step saving.

8. Using the equipment catalogs, identify the following pieces of equipment and check the utility ratings and capabilities of each.

   a. upright mixer-table model
   b. horizontal mixer-floor model
   c. open top tank mixer
   d. 1½ horsepower food cutter
   e. gravity feed slicer
   f. 30 pound capacity vegetable peeler
   g. roasting and baking oven combo
   h. base-fired gas oven
   i. convection oven
   j. rotary oven
   k. full surface griddle
   l. open unit griddle
   m. chop suey range
   n. french plate range top
   o. back shelf broiler (salamander)
   p. single unit gas broiler
   q. double electric broiler
   r. 7.3 kg. capacity electric deep fat fryer
   s. microwave oven with a browning unit
   t. two-compartment steamer
   u. 20 qt. trunion kettle
   v. conveyor toaster
   w. 4 slot toaster
   x. 835 watt waffle baker or 85 watt waffle baker
   y. four egg-egg cooker

Suggested Resources

Book

Kotschevar, Lendal H., and Margaret E. Terrell. Food Service Planning: Layout and Equipment. New York: John Wiley and Sons, 1977, pp. 191-229; 320-442; 445-486.

Audiovisual

National Restaurant Association, Educational Materials Center, Suite 2600, 1 IBM Plaza, Chicago, Illinois 60621.

FC 02 The Angry Flame

National Education Media, Inc., 15760 Ventura Blvd., Encino, California 91436.

FS 101 Deep Fat Frying
FS 141 The Microwave Oven

Progress Test--Your instructor will select a number of activities from Units 1 and 2. If your work is satisfactory, proceed to Unit 3.

UNIT 3

SALAD AREA

Objective

The MATCHE student will be able to identify the operations and activities which occur within the salad area of a food service operation.

Overview

Salad making areas are usually a division of a pantry section. The requirements of such an area are often diversified due to the simplicity or extensive preparation which can occur. Salad area requirements may range from simple lettuce type of production to preparing salads requiring chopping, dicing, slicing, and mixing materials and ingredients. The latter would, of course, require a variety of equipment and spaces.

The purpose of this unit is to help you to identify the multiplicity of operations, activities, equipment, and space requirements of a salad area in a food service operation.

Narrative Summary

In the Western European kitchen (or in those in the United States which are run by Western European-trained personnel), the salad making areas are part of the overall section called the "Garde Manger" section. The work done by the Chef Garde Manger is considered to be on a par with that of the Chef Patissier (the pastry chef) and second only to the Sous Chef (the executive officer of the kitchen, who reports only to the Executive Chef). It is evident, then, that with those who truly believe that food preparation is a high profession, the salad and pantry sections are of great importance and prestige. It is important that the student become acquainted with this important section.

All activities should be submitted to and discussed with the instructor.

Suggested Activities

1. Read pp. 508-69, 213-19, Kotschevar and Terrell, Food Service Planning: Layout and Equipment; pp. 176-220, Kotschevar, Quantity Food Production.

   All sections of a kitchen use refrigeration equipment, but the pantry uses this equipment almost exclusively. Auxiliary equipment, such as transportation and mobile equipment, plus utensils and tableware, are used in the salad area as in other sections.

2. If possible, visit a food facility which has a full production salad section.

   a. Evaluate the salad section from the standpoint of:
      (1) Supervision
      (2) Interrelationships with other sections
      (3) Freedom from interruption from outsiders
      (4) Step-saving

   b. State the length of time that the salads are held after preparation until served.

   c. Chart the number and kinds of desserts which are prepared.

   d. Study the layout for efficient operation, supervision, space utilization.

   e. On a rough sketch of the entire food preparation area, place the salad-pantry area and chart the flow of materials from receiving to service pick up. Evaluate this flow for efficiency, effectiveness.

3. Demonstrate to your instructor:

   a. fluting a cucumber
   b. wrapping a cut sandwich
   c. wrapping an uncut sandwich
   d. nine ways to cut sandwiches
   e. twenty-five ways to arrange the sandwiches

4. Define these terms used in salad preparation:

   a. mis en place
   b. underliner
   c. body
   d. garnish
   e. dressings

5. Name six types of salads and give three examples of each.

6. Define and state the use of the terms "canape" and "hors d'oeuvre."

7. Explain two main constraints placed upon garnishes.

8. Define chaud-froid sauce.

Suggested Resources

Books

Kotschevar, Lendal H., and Margaret E. Terrell. Food Service Planning: Layout and Equipment. New York: John Wiley and Sons, 1977, pp. 508-69, 213-19.

Kotschever, Lendal H. Quantity Food Production. Boston: Cahners Books, 1974, pp. 176-220.

Mok, Charles. Practical Salad and Dessert Art. Boston: Cahners Books, 1973, pp. 1-39.

Sonnenschmidt, Frederick H., and Jean Nicolas. The Professional Chef's Art of Garde Manger. Boston: Cahners Books, 1976.

Audiovisual

National Education Media, Inc., 15760 Ventura Blvd., Encino, California 91436.

FS 106 A Cool Head for Salads
FS 107 Sandwich Preparation and Presentation
FS 108 Fast Sandwich Making

Progress Test--Your instructor may select a number of the activities from this unit. If you have accomplished the objectives of Unit 3, proceed to Unit 4.

UNIT 4

BAKERY AND DESSERT AREA

Objective

The MATCHE student will be able to identify the operations and activities which occur within the bakery and dessert area of a food service operation.

Overview

The bakery and dessert preparation areas are often combined in food service operations. The close relationship of the two operations allows for sharing of equipment and space. Work center and space requirements tend to develop in relation to items prepared and common functions of the section. Those frequently required include: 1) formula weighing and mixing; 2) cooking of puddings, sauces, fillings, and frostings; 3) frying of doughnuts or other desserts; 4) folding, rolling, cutting, or shaping of pastry; 5) pie and dough rolling; 6) proofing and baking; 7) freezing; and 8) pan washing and storage. Each of these activities requires a definite space and equipment and/or utensils.

The purpose of this unit is to help you identify the space and equipment requirements for the aforementioned activities in addition to other bakery and dessert area operations.

Narrative Summary

In this section are covered the other "prestige areas" (patissiere) of the kitchen. Much art work is done in this area. As we eat with our eyes, these activities are very important to the overall dining enjoyment of the patron. The student and worker in the bakery and dessert areas, however, must keep in mind the profit motive (in the for-profit segment of the industry) and the motive to stay within the budget (in the non-profit segments of the industry) for the overall operation.

All activities should be submitted to and discussed with the instructor before proceeding with the unit tasks.

Suggested Activities

1. Review the literature in the resource list.

2. Develop a glossary to include each of the following terms used in relation to bakery and dessert area:

absorption	grease (verb)
bake	humidity
bag out	ice
beat or whip	knead
blend	leavening
caramelize	measure
cream	mix
crystallization	moist
cut in	mold, or mould
decoration	rise
develop dough	roll
dissolve	scaling
dust	scrape
fermentation	sift
flaky	stipple
fold	stir
fry	texture
gelatinize	tough
gluten	volume
gradually	wash
grain	wet peak

3. Describe the difference between:

   a. Almond Cakes and Almond Gateaux
   b. Banbury Cakes and Battenbergs
   c. Linzer Biscuits and Linzer Torte
   d. Butterscotch Crunch and Butterscotch Caramel
   e. Genoa Cakes and Genoese Cakes
   f. Coconut Honeys Balls and Coconut Honeys
   g. Drescan and Dresden
   h. Ginger Fruits and Ginger Fruitcakes
   i. Madeira Cakes and Madeleines
   j. Navettes and Nut Tarts
   k. Mandel Gipfel and Marianas
   l. Torte Type Gateaux and Torten
   m. Winter Slices and Yuletide Kups

4. Draw an illustration of nine different types of agitators which might be found in the mixing section of a large bakery.

5. Explain the use(s) of the following attachments for a mixing machine.

   a. Bowl extension ring and cover
   b. Bowl adaptor ring
   c. Bowl truck
   d. Oil dropper

6. Explain the use of the dough divider.

7. Illustrate on paper the shapes of dough possible when using the Moline dough cutting devices.

8. Explain the difference between a dough roller, moulder, and/or sheeter.

9. Illustrate how to get twenty servings from a two-layer, 10" cake.

10. List the score points used in judging pastry quality.

11. Select three bread recipes. Compare ingredients, and calculate the percentage of each ingredient.

12. List at least four safety factors to be observed in using a mixer.

Suggested Resources

Barrows, A. B. Everyday Productions of Baked Goods. Boston: Cahners Books, 1975, pp. 380-84.

Kotschevar, Lendal H., and Margaret E. Terrell. Food Service Planning: Layout and Equipment. New York: John Wiley and Sons, 1977, pp. 460-511.

Sultan, William J. Elementary Baking. New York: McGraw-Hill, 1969, pp. v-xvii.

Terrell, Margaret E. Professional Food Preparation. New York: John Wiley and Sons, 1971, pp. 463-84.

There is no Progress Test. Check with your instructor, if no further assignments, proceed to Unit 5.

UNIT 5

DISHWASHING AREA

Objective

The MATCHE student will be able to identify the operations and activities which occur within the dishwashing area of a food service operation.

Overview

No phase of food service is of greater importance than the proper washing and sterilizing of all dishes and serving utensils. Even the smallest food operation requires adequate space in which to perform this task effectively. Whether the operation uses only machine washing or hand dishwashing in addition to mechanical methods, equipment and space requirements are necessary to allow for scraping, stacking, and soaking or pre-rinsing the dishes.

The purpose of this unit is to help clarify the activities and operations within the dishwashing area of a food service operation and the space and equipment requirements of that area.

Narrative Summary

Anyone who has worked in food service for any length of time has either worked through a dish machine breakdown or a time in which the dishwashers did not work for some reason. In either case, it does not take very long to realize the importance of the dishwashing area and personnel. Aside from the immediate and continuing need for washed dishes, pots, and utensils, there is also perhaps a more important aspect of this area. The dishwashing personnel usually have the direct responsibility for the sanitation program in the business or institution. Nothing is more hazardous to the overall viability of the establishment than an outbreak of food poisoning with the patrons of the establishment.

All activities should be submitted to and discussed with your instructor.

Suggested Activities

1. Review the literature listed at the end of the unit. Then begin the activities. Use responses as indicators for need for additional reading of resources.

2. Obtain permission to work in the dish room in a food facility which has a large dish machine. Work at least two hours during the rush hours of both breakfast and dinner. Write a report based on the following questions:

   a. Is the machine a one-tank? Two? Three?
   b. Is the water flow (overflow) from rinse to wash or from wash to rinse? Why?
   c. Is there a reject sink? Is it used? For what?
   d. Are there facilities for the operator to wash his or her hands between the feed and catch ends of the machine? Do the operators use them?
   e. How many times during your stay at the machine did a supervisor come to check on the operation?
   f. What device is used to automatically feed in dish soap?
   g. Did a buzzer go off while you were working? What happened then?
   h. Was a job description posted on the wall? If so, what did it say about setting up and breaking down the machine?

3. If possible, help break down the machine at the end of the work period. Describe how well the workers followed good dish room sanitation procedures using the Economics Laboratory manual as a guide.

4. If possible, find a facility which has hand washing of dishes. Compare method used in this operation with mechanical dishwasher sanitizing the dishes, glassware, and silver.

5. List the three main dishwashing procedures regardless of the type of machine or if the dishes are done by hand.

   a. List the twelve steps usually followed in the dishwashing process.
   b. Check the three processes that may be carried out in the dining room before the dishes are brought to the kitchen.

6. Explain the water temperature required by state health authorities for dishwashing processes including length of time dishes must be exposed to 170 degree or 180 degree water.

7. In the planning of dish machine spaces, food facilities engineers adapt layouts in terms of load, flow, organization of work and personnel, and to minimize motion. What do the terms "load" and "flow" mean in this context?

8. Give the minimum amount of floor space needed for four workers in a new dish room operation.

Suggested Resources

Kotschevar, Lindal H., and Margaret E. Terrell. Food Service Planning: Layout and Equipment. New York: John Wiley and Sons, 1977, pp. 152, 170, 255, 259, 268, 278-301, 450.

Longree, Karla, and Gertrude G. Blaker. Sanitary Techniques in Food Service. New York: John Wiley and Sons, 1971, pp. 78-119.

National Institute for the Food Service Industry. Applied Food Service Sanitation. Chicago: NIFI, 1974, pp. 109-120.

West, Bessie Brooks, Levelle Wood, Virginia Harger, and Grace Shugart. Food Service in Institutions. New York: John Wiley and Sons, 1977, pp. 597-627.

Pamphlet

Economics Laboratory, Inc. Food Equipment Sanitation Cleaning Procedures. St. Paul, Minnesota: Institutional Division, Guardian Building, pp. 91-98.

Catalog

Hobart-Hobart Food Equipment Company, Troy, Ohio 45374. Dish and pot machine sections.

Audiovisual

National Restaurant Association, Educational Materials Center. Suite 2600, 1 IBM Plaza, Chicago, Illinois 60621.

FC 05 Care and Handling of Dishes
FC 09 Dishroom Maintenance and Cleaning
FC 10 Flies, Filth and Food - Part 1
FC 11 Flies, Filth and Food - Part 2
FC 12 The Freeloaders
FC 31 That Extra Something

National Education Media, Inc., 15760 Ventura Blvd., Encino, California 91436.

FS 109 Kitchen Safety: Preventing Falls
FS 110 Kitchen Safety: Preventing Burns
FS 112 Kitchen Safety: Preventing Cuts and Strains
FS 130 Kitchen Safety: Preventing Fires
FS 113 Dining Room Safety
FS 122 Dish Machine Operator
FS 123 Sanitation: Why the Fuss?
FS 124 Sanitation: Rules Make Sense
FS 125 Dining Room Sanitation
FS 134 Sanitation: Rodent and Insect Control

There is no Progress Test. Check with your instructor, if no further assignments, proceed to Unit 6.

UNIT 6

SERVING AREA

Objective

The MATCHE student will be able to identify the operations and activities which occur within the serving area of a food service operation.

Overview

Space allowance of serving areas should be adapted to the needs of the specific facility. The menu, organization of work, number served, type of service, and a la carte items should be considered.

The purpose of this unit is to help you identify the equipment, activities, operations, and space which are needed for the serving area of a food service operation.

Narrative Summary

In the language of the world of Marketing, four "Ps" contain the essential ingredients of successful enterprise: Price, Place, Promotion, Product. In the food service world, product is handled in the kitchen; promotion, price, and place are all brought together in the serving areas. Those who have the responsibility of running the food service areas, from the marketing standpoint, have a great deal to do with success, or lack of it, in the food service world. It is toward an understanding of this area that this unit is written.

Suggested Activities

All activities should be submitted to and discussed with your instructor.

1. Review the literature in the resource list and as many of the audiovisuals as available. These are informative and interesting. Then go to the activities. Use the questions as a progress test, self-administered.

2. Observe three different dining rooms or serving areas and evaluate means used and degree of success in providing:

   a. Preservation of quality (explain measures used for your judgment of freshness, temperature, and appearance).

   b. Fast service (how much time elapsed from time of entry until guests were served?)

   c. Hospitality and attractiveness (are guests made to feel welcome?). What group of people would be especially attracted to the decor?

   d. Sanitation and food service (what protection is given and what chances exist for contamination?).

   e. Safety from accidents (list points where special provision for safety has been made or where hazards exist).

3. Chart the traffic flow in a cafeteria or commercial restaurant showing lines followed by food facility personnel and customers.

4. List small equipment used in the following situations and state the use of each for:

   a. counter service
   b. cafeteria
   c. catering service
   d. room service

5. Plan a layout for service for a selected type of food facility. Explain arrangement and reasons for your choices.

6. Define the following terms:

   a. side stand
   b. station
   c. silencer
   d. cover

7. List items found on a side stand.

8. A guest has ordered the following meal:
   Tomato juice
   Steak
   Potatoes
   Apple pie
   Coffee
   As a waiter or waitress, what questions do you ask to ensure that the customer gets what he wants?

9. Explain the following terms:

   a. gueridon
   b. commis de rang
   c. chef de rang
   d. rechaud
   e. tureen

10. Draw a diagram to show the table set up for French (or Russian) service. How many guests can be served by one waiter using Russian service?

11. Demonstrate (a) the proper procedure for dipping ice cream and (b) how to make a chocolate milk shake.

12. Define "portion control."

13. Define the following terms:

   a. a la carte
   b. a la king
   c. a la maison
   d. amandine (almondine)
   e. baked Alaska
   f. bechamel
   g. bouillabaisse
   h. bouquetiere
   i. champignon
   j. coddled
   k. crepes suzettes
   l. dejeuner
   m. demitasse
   n. farci
   o. escargots
   p. espagnole
   q. flambe
   r. fricassee
   s. fromage
   t. gibier
   u. gratin
   v. julienne
   w. macedoine
   x. mocha
   y. paté
   z. pot au feu
   aa. printanier
   bb. puree
   cc. serviette
   dd. shirred
   ee. spumoni
   ff. strudel
   gg. table d'hôte
   hh. tasse
   ii. tournedos
   jj. veloute
   kk. vinaigrette
   ll. vol au vent
   mm. wiener schnitzel
   nn. zwieback

Suggested Resources

Books

Harris, Ellen Adeline. Professional Restaurant Service. New York: McGraw-Hill, 1966, pp. 17-85.

Kotschevar, Lendal H., and Margaret E. Terrell. Food Service Planning: Layout and Equipment. New York: John Wiley and Sons, 1977, pp. 231-73.

Morgan, William J., Jr. Supervision and Management of Quantity Food Preparation. Berkeley: McCutchan Publishing, 1974, pp. 321-25.

Stokes, John W. How to Manage a Restaurant. Dubuque, Iowa: William C. Brown, 1967, pp. 66-107.

Audiovisual

National Restaurant Association, Educational Materials Center, Suite 2600, 1 IBM Plaza, Chicago, Illinois 60621.

FC 14 Ladies and Gentlemen in Waiting
FC 20-23 The Smart Waitress, Parts I-IV
FC 24 The Courtesy Caper
FC 25 Tips for the Professional
FC 31 That Extra Something

National Education Media, Inc., 15760 Ventura Blvd., Encino, California 91436.

FS 113 Dining Room Safety
FS 114 Courtesy: Food Service Is People Service
FS 115 Courtesy: The Inside Story
FS 116 How Do YOU Look When It Counts?
FS 117 Taking the Order
FS 119 Table Settings
FS 120 Bussing
FS 128 The Rush Hours
FS 129 Cafeteria Service
FS 125 Dining Room Sanitation

There is no Progress Test. Check with your instructor, if no further assignments, proceed to Unit 7.

UNIT 7

RECEIVING AND STORAGE AREA

Objective

The MATCHE student will be able to identify the operations and activities which occur within the receiving and storage area of a food service operation.

Overview

The receiving and storage area of a food service operation is an integral facet of the total operation. Storage and receiving activities will vary according to the type of service, menu, and food purchased. The space required and equipment necessary to carry out the activities of the area will depend on the various types of storage necessary (e.g., dry, dry ventilated, common, or general).

The purpose of this unit is to help you understand the relationship of the receiving and storage area to the total food service operation. An awareness of the activities, space, and equipment requirements will be achieved after completion of the unit.

Narrative Summary

One of the foremost authorities in food service management, Paul R. Handlery, past president of the American Hotel Association and President of Handlery Hotels of California, once stated, "It's no use buying smart unless you receive smart." But we have to back up a bit farther than that in this, our last unit in this module, in order to get a better picture of the food service management continuum. L. Kotschevar, in his most recent of many books, titled "Management by Menu," points out that the following logical steps are followed by those who successfully plan and operate restaurants or other food service facilities:

1. A marketing study is made to determine the need, if any.
2. If a need is found, the need points out the menu.
3. The menu suggests specifications of purchase.
4. With "specs" the operator can do a market search to see who is out there who wants to sell him the raw materials he needs to produce the food for the menu.

5. He can then ask for bids (not necessarily formal).
6. He then orders.
7. NOW he must receive and usually store before he can issue to the food production people.

So we see that the receiving and storage areas are links in the food service chain and a chain is no stronger than its weakest link. This unit on the receiving and storage areas is included so that the student can become more cognizant of the total food service field.

Suggested Activities

All activities should be submitted to and discussed with your instructor.

1. Review the literature in the resource list at the end of the unit. Use the activities as means of finding those phases needing further study.

2. Select a specific food facility for the following study:

   a. State food on menus, type of preparation done in the unit, and the volume served.
   b. Classify foods in terms of storage needs (dry, chilled, frozen, etc.), volume, and time to be stored.
   c. Chart the movement of materials from receiving, to storage, to points of use.
   d. List and evaluate storage equipment (shelving, carts, bins, other) in terms of:

      (1) convenience of use
      (2) safety for supporting load limits
      (3) cleanability and sanitation
      (4) appropriateness of cost on the basis of suitability, convenience and durability

   e. Describe provisions made for storage of:

      (1) linen and laundry supplies
      (2) paper supplies
      (3) cleaning equipment and supplies
      (4) reserve equipment and housekeeping supplies

   f. Recommend ways in which storage facilities might be improved, giving reasons for your recommendations and an estimate of probable costs.

3. List at least eight types of items to be stored in dry, ventilated storage. State ideal temperature of dry storeroom.

4. List at least five types of food to be stored in refrigerated and low-temperature storage.

5. List at least ten "tools of the trade" for the receiving steward.

Suggested Resources

Kotschevar, Lendal H., and Margaret E. Terrell. Food Service Planning: Layout and Equipment. New York: John Wiley and Sons, 1977, pp. 173-89.

Waskey, F. H., and M. C. Warfel. The Professional Food Buyer. Berkeley: McCutchan, 1978 (in press).

After you have completed the final unit for this module, you should be ready to take the Module Posttest. See your instructor.

Suggested Resources

Books

Axler, Bruce H. Management of Hospitality Operations. Indianapolis: Bobbs-Merrill, 1976.

Barrows, A. B. Everyday Productions of Baked Goods. Boston: Cahners Books, 1975.

Eshbach, Charles E. Food Service Management. Boston: Cahners Books. No date.

_____. Food Service Trends. Boston: Cahners Books, 1974.

Fearn, David A. Food and Beverage Management. London: Butterworths, 1973.

Haines, Robert G. Food Preparation for Hotels, Restaurants, and Cafeterias. Chicago: American Technical Society, 1968.

Harris, Ellen Adeline. Professional Restaurant Service. New York: McGraw-Hill, 1966.

Kahrl, William L. Food Service Productivity and Profit Ideabook. Boston: Cahners Books, 1975.

Keiser, James, and Elmer Kallio. Controlling and Analyzing Costs in Food Service Operations. New York: John Wiley and Sons, 1974.

Keister, Douglas C., and Ralph D. Wilson. Hotel and Restaurant Management. Berkeley: McCutchan, 1971.

Kotschevar, Lendal H. Quantity Food Production. Boston: Cahners Books, 1974.

Kotschever, Lendal H., and Margaret E. Terrell. Food Service Planning: Layout and Equipment. New York: John Wiley and Sons, 1977.

Longree, Karla, and Gertrude G. Blaker. Sanitary Techniques in Food Service. New York: John Wiley and Sons, 1971.

Mok, Charles. Practical Salad and Dessert Art. Boston: Cahners Books, 1973.

Morgan, William J., Jr. Supervision and Management of Quantity Food Preparation. Berkeley: McCutchan, 1974.

National Institute for the Food Service Industry. Applied Food Service Sanitation. Chicago: NIFI, 1974.

Sonnenschmidt, Frederick H., and Jean Nicolas. The Professional Chef's Art of Garde Manger. Boston: Cahners Books, 1976.

Stokes, John W. How to Manage a Restaurant. Dubuque, Iowa: William C. Brown, 1967.

Sultan, William J. Elementary Baking. New York: McGraw-Hill, 1969.

Terrell, Margaret E. Professional Food Preparation. New York: John Wiley and Sons, 1971.

Villella, Joseph A. The Hospitality Industry: The World of Food Service. New York: McGraw-Hill, 1975.

Waskey, F. H., and M. C. Warfel. The Professional Food Buyer. Berkeley: McCutchan, 1978 (in press).

West, Bessie Brooks, Levelle Wood, Virginia Harger, and Grace Shugart. Food Service in Institutions. New York: John Wiley and Sons, 1977.

Periodicals, Bulletins and Pamphlets

Almarode, Richard L. "Developing a Hospitality Program in High Schools," Council of Hotel, Restaurant and Institutional Education, Pennsylvania State University, 1970, pp. 29, 30, 35-46.

_____. "Guidelines for Hospitality Education in Junior Colleges". Council of Hotel, Restaurant and Institutional Education, Pennsylvania State University, 1967, pp. 35-37.

Batmale, Louis F., and George G. Mullany, eds. "Career Training in Hotel and Restaurant operation ... at City College of San Francisco". San Francisco: City College of San Francisco, Ocean and Phelan Avenues. (Suggest you contact the Statler Library at CCSF) pp. 40-42; 71-73; 92-95.

Economics Laboratory, Inc. Food Equipment Sanitation Cleaning Procedures. St. Paul, Minnesota: Institutional Division, Guardian Building.

Audiovisual Aids
Cassettes and Reel-to-Reel Movies

National Restaurant Association, Educational Materials Center, Suite 2600, 1 IBM Plaza, Chicago, Illinois 60621.

FC 02 The Angry Flame
FC 05 Care and Handling of Dishes
FC 09 Dishroom Maintenance and Cleaning
FC 10 Flies, Filth and Food - Part 1
FC 11 Flies, Filth and Food - Part 2
FC 12 The Freeloaders
FC 14 Ladies and Gentlemen in Waiting
FC 20-23 The Smart Waitress - Parts I-IV
FC 24 The Courtesy Caper
FC 25 Tips for the Professional
FC 30 That Final Touch

National Education Media, Inc., 15760 Ventura Blvd., Encino, California 91436.

FS 101 Deep Fat Frying
FS 102 Give Your Eggs a Break
FS 103 Carving the Rib Roast
FS 104 The Hamburger Sandwich
FS 105 Broiling
FS 106 A Cool Head for Salads
FS 107 Sandwich Preparation and Presentation
FS 108 Fast Sandwich Making
FS 131 Roasting
FS 132 Braising and Stewing
FS 133 Vegetable Preparation
FS 136 Simmering and Poaching
FS 137 Short Order Cooking
FS 141 The Microwave Oven
FS 114 Courtesy: Food Service Is People Service
FS 115 Courtesy: The Inside Story
FS 116 How Do YOU Look When It Counts?
FS 117 Taking the Order
FS 119 Table Settings
FS 120 Bussing
FS 128 The Rush Hours
FS 129 Cafeteria Service
FS 135 Selling Wine and Liquor
FS 109 Kitchen Safety: Preventing Falls
FS 110 Kitchen Safety: Preventing Burns
FS 111 Preventing Machine Injuries
FS 112 Kitchen Safety: Preventing Cuts and Strains
FS 130 Kitchen Safety: Preventing Fires
FS 113 Dining Room Safety

FS 122 Dish Machine Operator
FS 123 Sanitation: Why the Fuss?
FS 124 Sanitation: Rules Make Sense
FS 125 Dining Room Sanitation
FS 134 Sanitation: Rodent and Insect Control

Equipment Catalogs

Anets-Anetsberger Bros., Inc., Northbrook, Illinois 60062

Bally-Bally Base and Cooler, Inc., Bally, Pennsylvania 19503

Carter-Hoffman-Carter Hoffman Corporation, 1551 McCormick Avenue, Mundelein, Illinois 60060

Cres-Cor:Crescent Metal Products, Inc., 12711 Taft Avenue, Cleveland, Ohio 44100

Thermaduke-Duke Manufacturing Company, St. Louis, Missouri 63247

GE-General Electric Commercial Equipment Department, 14th and Arnold Streets, Chicago, Illinois 60600

Groen-Groen Division Dover Corporation, 1900 Pratt Blvd., Elk Grove Village, Illinois 60007

Henny Penny-Henny Penny Corporation, Eaton, Ohio 45320

Hobart-Hobart Food Equipment Company, Troy, Ohio 45374

Seco-Seco Food Preparation and Service Equipment, P.O. Box 7116, St. Louis, Missouri 63177

Shellymatic-Shelly Manufacturing Company, P.O. Box 308, Tamiami Station, Miami, Florida 33144

South Bend-South Bend Range Company, South Bend, Indiana 46621

Vulcan-Hart:Vulcan-Hart Corporation, 3600 North Point Blvd., Baltimore, Maryland 21222

MODULE PRE/POSTTEST

Operations and Activities
of a Food Service Operation

Student _____

Instructor _____

Date _____

Instructor: You may wish to pre- or posttest one unit of this module at a time. You will find each of the questions categorized by units in the answer key. This will assist you in organizing a test for a student's particular objectives.

Student: Before attempting the pretest, read the module objectives and overview. This pre/posttest, if taken in its entirety, will test your knowledge of the information presented in this module. You need study only those units that are prescribed on the basis of test results. It is suggested that you consult the narrative summary, lists of activities, and resource list for each unit, regardless of whether the unit activities are required.

1. The work centers in a full-production kitchen include six categories. List these six categories (your terminology here is not as important as is your knowledge of the areas).

   a.

   b.

   c.

   d.

   e.

   f.

2. In a college and university feeding operation, the cost of labor may fluctuate as much as 15 percentage points, depending upon the types of service offered. Between which percentages will these labor costs fluctuate?

Pre/posttest (continued)

3. In both the commercial and non-profit areas of food service is found a category of food services called "delivered foods." Name two such types of operations.

   a.

   b.

4. Commercial food service establishments are usually divided into three broad categories. Name the three categories.

   a.

   b.

   c.

5. What type of food service has the following categories of food preparation and service: centralized, centralized bulk, and decentralized food preparation?

6. The type of food service which serves Type A lunches is _____.

7. The three distinct parts of a kitchen layout are: _____,

   _____, and _____.

8. Each task performed in a kitchen can be broken down into three component parts:

   a.

   b.

   c.

9. Kitchens work on the principle of _____ flow, whereas a car manufacturing plant works on the principle of straight line flow.

Pre/posttest (continued)

10. The concepts of "store at point of first use," "minimize handling and storage," and "coordinate," are three of the six major concepts in

_____.

11. A micromotion study uses _____ as a means of detecting jerky, inefficient motion.

12. One of the types of work analysis tools used shows the relation of the working cycle of the worker and a piece of equipment. This is called a _____ _____ _____ chart.

13. Matching question: place single letter behind proper phrase.

a.	decibel	aa.	fire safety ____
b.	foot candle	bb.	relative humidity ____
c.	relative humidity	cc.	wet bulb ____
d.	intervet "T" shape	dd.	60 minutes ____
e.	wet bulb	ee.	sugar ____
f.	OSHA	ff.	sound ____
g.	common storage	gg.	light ____
h.	turnover rate of one	hh.	body balance ____
i.	self-closing louvres	ii.	toxic in foods ____
j.	copper, brass	jj.	safety ____

14. Thermaduke is the brand name of a company which makes _____ equipment.

15. "Quantity foods" are considered to be manufactured whenever an establishment is preparing for _____ or more people.

16. T F A high school home economics foods lab/kitchen could be turned into a satisfactory Quantity Food Preparation space for two to four students at a time if some "transitional size" equipment were added.

17. Arrange the following work sections in a logical sequence. (Use letters.)

a. ware and pot washing
b. pre-preparation
c. service
d. storage
e. receiving
f. preparation

___ ___ ___ ___ ___ ___

Pre/posttest (continued)

18. Matching question. Match the single letter with the double and triple letters. You may use the single letters more than once.

a.	mixer	aa.	upright or horizontal ____
b.	rotating bowl	bb.	rectangular or round ____
c.	slicer	cc.	cool zone ____
d.	vegetable peeler	dd.	spinning gears ____
e.	dish machine	ee.	compactor ____
f.	disposal	ff.	5-15 PSIG ____
g.	oven	gg.	discharge chute ____
h.	range	hh.	automatic basket lift ____
i.	broiler	ii.	food cutter ____
j.	fryer	jj.	up to 4 compartments ____
k.	microwave oven	kk.	French plates
l.	steamer	ll.	power stirrer ____
m.	steam kettle	mm.	open units ____
n.	toaster	nn.	molecular agitation ____
o.	waffle baker	oo.	convection ____
		pp.	pressure models ____
		qq.	rotary ____
		rr.	trunion ____
		ss.	slot or conveyor ____
		tt.	solid heating plates ____
		uu.	deck ____
		vv.	chop suey ____
		ww.	low water cut out ____
		xx.	gravity feed ____
		yy.	racks ____
		zz.	infra-red ____
		aaa.	1500-2000 degrees, f. ____
		bbb.	planetary action ____
		ccc.	most wasteful of heat ____
		ddd.	salamander

19. T F In electricity, OHms measures resistance.

20. T F Amps in electricity can be likened to gallons per minute flow in water.

21. T F Light quantity is measured in lumens, while light intensity is measured in foot candles.

22. T F Ceilings should have lower reflectance than furniture.

23. T F If the pH of water is not above 7.0, either copper or plastic pipe must be used.

Pre/posttest (continued)

24. T F One boiler horse power (BHP) equals 24.5 pounds of steam per hour.

25. T F When a building is constructed properly for energy conservation, the amount of air change resulting from seepage from outside can be reduced from 3 to 4 per hour to a little less than 3.

26. T F A BTU is the amount of heat needed to raise one gallon of water one degree F., while a Kcal is the amount of heat needed to raise one gram of water 1 degree C.

27. Conduction, convection, and radiation are methods of _____.

28. T F The evaporator is located within the ambient area of the refrigerator.

29. T F The condensor is located inside the ambient area.

30. T F The compressor is run by steam in most cases.

31. Which of the following items would probably not be found in a sandwich work center?

a. bread dispenser
b. toaster
c. refrigerator
d. steam jacketed kettle
e. knife rack
f. garbage disposal
g. counter
h. refrigerated counter pans

32. T F A canape is always hot, while an hors d'oeuvre is always cold.

33. T F Salad garnishes should be complementary and edible.

34. T F Molded salads are usually made in part from gelatin.

35. Ceasar, citrone, lorenzo, and mimosa are all types of _____.

36. Perfection is a type of _____ salad.

37. The bake shop often must share the use of ovens, mixers, and sinks with the _____ section.

38. Name three of the nine main centers usually found in a large, full service "scratch" bake shop.

39. T F Planetary action is noted in a doughnut machine.

Pre/posttest (continued)

40. The size of rolls which are formed in a dough divider is determined by _____.

41. Moline Company makes _____.

42. Temperature and _____ _____ are important in a proof box.

43. Which two agitators are usually supplied as standard equipment for a large mixing machine?

44. A Charlotte Russe will have _____ _____ arranged around the outside in a verticle manner.

45. The _____ end of the dish machine comes first.

46. T F The catch end of the dish machine is at the front end of the machine.

47. There should be a _____ sink in the dishwashing area for soaking dishes which have not "come clean" in the machine.

48. T F In a three-tank Hobart machine, the flow of water is from the prewash to the rinse areas.

49. T F The automaticity of the detergent feed on a dish machine comes from a pH sensor.

50. In dish rooms where an employee may well work both ends of the dish machine in any one shift, a _____ should be provided between the two machine ends.

51. Most county health departments call for _____ degree F. rinse water.

52. T F In kitchen layout and design, the term "load" refers to the path that the dishes follow, while the term "flow" refers to the number of dishes flowing through the operation.

53. T F When a refrigerated garbage disposal room is used, the temperature should remain in the area of 50 degrees C.

54. T F Hollandaise held at the steam table should be kept in the temperature range of 160-180 f. to delay bacterial growth.

55. T F Ice cream that is dipped at -13 to -19 degrees C. will lack "bright flavor."

Pre/posttest (continued)

56. T F A dining room using carts will require less square footage per guest than one without cart service.

57. T F A scramble system used in a cafeteria usually speeds up the service.

58. T F In centralized service in a hospital, the food is sent to the wards in trucks for portioning in the wards.

59. T F In school food service, young children are not as prone to accept packaged foods as are their parents in cafeterias.

60. T F The amount of time between the time an airliner lands, unloads soiled dishes, loads up and leaves is referred to in the trade as "turn around time."

61. Gueridons and rechaud lamps are used traditionally in _____ type of service.

62. T F Of the three basic types of service in full-service restaurants in America today (French, Russian, and American), American is the slowest.

63. T F In Russian service the table arrangements are the same as in French.

64. T F A French buffet usually has a smaller number of choices of food than does the regular buffet.

65. T F A banana split usually has four kinds of ice cream in it.

66. T F A platform scale is operated by springs and is therefore not as accurate as a balance scale.

67. T F A room temperature of 70 degrees C. is generally considered to be proper for a dry storeroom.

68. T F Ventilated common storage should have an ambient area temperature of about 50-60 degree F.

69. T F General storage is usually refrigerated.

70. T F It is customary to have in reserve an amount of china and silverware that is approximately 10-20 percent of that in use.

Pre/posttest (continued)

71. T F Generally speaking, the receiving and storage areas should be located at different ends of a food service building.

72. T F Commercial warehouses which house fresh fruits and vegetables generally have better storage facilities than do most restaurants. It therefore behooves the restaurateur to keep a minimum of these commodities on hand.

Return this test to your instructor for evaluation.

ANSWER KEY
MODULE PRE/POSTTEST

Operations and Activities of a Food Service Operation

Instructor:	Do not reproduce this page in students' booklets. You must retain it for grading and prescriptive purposes. Answers will vary with individuals. A preferred response might be similar to the answer presented.

(U-1) 1. a. ordering, receiving, storing
b. preprocessing of raw materials such as meats, vegetables, and fruits
c. cooking--soups, vegetables, meats, sauces, and bakery products
d. pantry or set-up section--salads, sandwiches, beverages, and desserts
e. service areas
f. housekeeping or clean-up departments--pot washing, dishwashing, and janitor services.

2. 25 - 40 percent

3. pizza, sandwiches, ice cream (any foods delivered on order to a specified location--Good Humor man, room service, etc.)

4. essential meal service; food for or with entertainment; catering for special needs or functions

5. hospitals

6. school lunch

7. work centers, work sections, and layout made up of work centers joined into sections

8. get ready, do, put away and clean up

9. functional

10. material handling

11. motion picture film

12. man and machine

13. aa-I, bb-E, cc-C, dd-H, ee-G, ff-A, gg-B, ii-J, jj-F

14. holding, steam table, hot food catalogs

15. 50

16. T

Pre/posttest Answer Key (continued)

(U-2)17. e. receiving, d. storage, b. pre-prep, f. prep, c. service, a. ware and pot washing.

18. aa-A, bb-O, cc-J, dd-F, ee-F, ff-L, gg-D, hh-J, ii-B, jj-L, kk-H, ll-M, nn-K, oo-G, pp-J, qq-G, rr-M, ss-N, tt-H, uu-G, vv-H, ww-L or M, xx-E, yy-E, zz-I, aaa-I, bbb-A, ccc-I, ddd-I.

19. T

20. F

21. T

22. F

23. T

24. F

25. F

26. F

27. heat movement

(U-3)28. T

29. F

30. F

31. d. steam jacketed kettle

32. F

33. T

34. T

35. salad dressings

36. gelatin

(U-4)37. cooking, main range, range battery

Pre/posttest Answer Key (continued)

38. Students should be explicit for credit:
    a. formula weighing and mixing
    b. cooking of puddings, sauces, fillings, and pastries
    c. frying of doughnuts and other desserts
    d. folding, rolling, cutting, or shaping of Danish or French pastry
    e. pie dough rolling, cutting, panning
    f. proofing, baking, removal to racks
    g. freezing of desserts
    h. landing, removal from pans, finishing, and dishing
    i. pan washing and storage.

39. F

40. the amount of dough put into the divider

41. rolling pin type of cutter

42. relative humidity

43. beater and whip

44. lady fingers

(U-5)45. feed

46. F

47. reject

48. F

49. T

50. handwashing sink

51. 180

52. F

53. F

(U-6)54. F

55. T

56. F

57. T

Pre/posttest Answer Key (continued)

58. F

59. T

60. T

61. French

62. F

63. T

64. F

65. T

(U-7)66. F

67. F

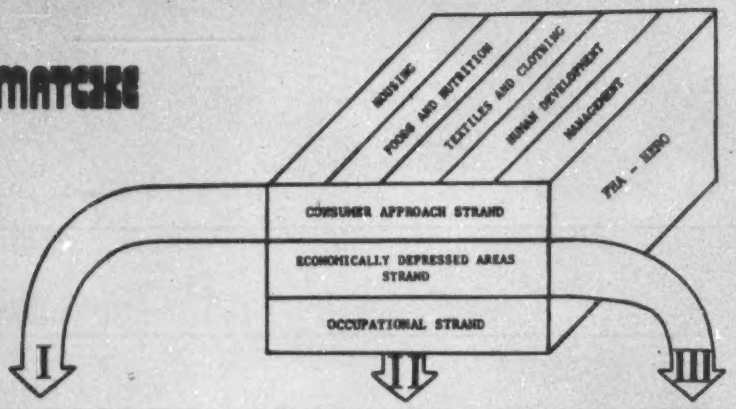
68. T

69. F

70. T

71. F

72. T



	I	II	III
A.	CORE: CONSUMER APPROACH TO HOMEMAKING EDUCATION 1 Life Styles and the Consumer 2 Community Consumer Resources 3 Consumer Rights and Responsibilities 4 Incorporating the Consumer Approach in Homemaking Classes	CORE: ESTABLISHING OCCUPATIONAL PROGRAMS 1 Analyzing Job Market Opportunities 2 Developing Occupational Programs 3 Implementing Occupational Programs 4 Evaluating Occupational Programs	CORE: TEACHING HOME ECONOMICS IN ECONOMICALLY DEPRESSED AREAS 1 Characteristics of Economically Depressed Areas 2 Life Style Characteristics of Economically Depressed Areas 3 Community Resources for Economically Depressed Areas 4 Developing and Implementing Programs for Economically Depressed Areas
	AREA (Module) PACKAGES	AREA (Module) PACKAGES	AREA (Module) PACKAGES
B.	HOUSING 1 Consumer Use of the Community 2 Procedures for Selecting a Community 3 Procedures for Selecting Housing 4 Shopping for a Home Loan 5 Procedures for Selecting Furnishings 6 Maintenance Procedures for Surfaces, Furniture, and Appliances	HOUSING 1 Occupational Opportunities Related to Housing and Interiors 2 Required Skills for Retail Sales of Furnishings and Related Household Items	HOUSING 1 Low Income Housing 2 Government Housing Programs 3 Low Income Furnishings
C.	FOODS AND NUTRITION 1 Technological, Sociological, Ecological, and Environmental Factors Related to Food 2 Regulatory Agencies Responsible for Wholesomeness and Quality of Foods 3 Consumer Aspects in Planning Meals 4 Cultural Food Patterns 5 Influences on Food Prices	FOODS AND NUTRITION 1 Occupational Opportunities Related Foods and Nutrition 2 Operations and Activities of a Food Service Operation 3 Managing a Food Service Operation	FOODS AND NUTRITION 1 Food Availability in Economically Depressed Areas 2 Low Income Food Patterns 3 Meal Management on a Low Income
D.	TEXTILES AND CLOTHING 1 Consumer Approach to Textiles and Clothing 2 Sociological, Psychological, and Economic Factors Affecting Clothing Selection 3 Clothing Needs of Individuals 4 Applications and Implications of New Technology in Textiles and Clothing	TEXTILES AND CLOTHING 1 Occupational Opportunities Related Textiles and Clothing 2 Assembly Line Garment Construction 3 Merchandising Textiles and Ready-To-Wear	TEXTILES AND CLOTHING 1 Clothing the Individual and Family 2 Utilizing Resources for Clothing and Textiles
E.	HUMAN DEVELOPMENT 1 Societal Changes Affecting the Family 2 The Relationship Between Spending Patterns and Interpersonal Relationships 3 Financial Pressures in Various Life Styles and Cycles 4 Individuals and Families in Crisis 5 Consumper Aspects of Parenthood	HUMAN DEVELOPMENT 1 Occupational Opportunities Related to Human Development 2 Children's Center Aide 3 Developing Programs for Preschool Children 4 Convalescent Home Aide	HUMAN DEVELOPMENT 1 Characteristics of Economically Depressed Area Families 2 The Child and the Economically Depressed Area Family 3 Resources for the Economically Depressed Area Family
F.	MANAGEMENT 1 Relationship Between National and Consumer Economics 2 Consumer Legislative Issues 3 Environmental Issues and the Consumer 4 Financial Management 5 Family and Individual Credit Management 6 Management View of the Multiple Role 7 The Metric System	MANAGEMENT 1 Occupational Opportunities Related to Home Management and Supporting Services 2 Occupational Preparation for Jobs Utilizing Housekeeping Skills	MANAGEMENT 1 Management Skills 2 Money Management 3 Marketing Practices in Relation to Low Income Clientele